

CLAIMS

What is claimed is:

1. A routing switch for use in a communications network, said  
network comprising routing switches interconnected by communication links, said  
5 routing switch comprising:  
one or more transceivers for being connected to associated links to  
one or more other routing switches in neighboring nodes;  
a switch fabric for routing information to and from said one or more  
transceivers; and  
10 one or more processors, said one or more processors for controlling  
said routing switch to:  
monitor a message from a neighboring node identifying  
attributes of said neighboring node;  
detect a change in said message from a previous message so  
15 as to identify a change in attributes of said neighboring node,  
corresponding to a topology change in said network;  
increment a session identifier, each said session identifier  
being associated with a different topology of said network; and  
communicate to other nodes in said network said change in  
20 said topology by identifying an incremented session identifier along  
with information identifying said change in said topology of said  
network.
2. A routing switch for use in a communications network, said  
25 network comprising routing switches interconnected by communication links, said  
routing switch comprising:  
one or more transceivers for being connected to associated links to  
~~one or more other routing switches in neighboring nodes;~~

a switch fabric for routing information to and from said one or more transceivers; and

one or more processors, said one or more processors for controlling said routing switch to:

5 detect messages from other nodes in said network related to a topology of said network, said messages including a session identifier, each said session identifier being associated with a different topology of said network;

detect a change in said topology by detecting a changed session identifier; and

if said session number has changed, revise said routing table based on said change in topology.

3. A method performed by a communications network, said network comprising nodes interconnected by communication links, said method comprising:

monitoring by each node a message from a neighboring node identifying attributes of said neighboring node;

15 detecting by a first node a change in said message from a previous message so as to identify a change in attributes of said neighboring node, corresponding to a topology change in said network;

incrementing a session identifier, each said session identifier being associated with a different topology of said network; and

20 communicating to other nodes in said network said change in said topology by identifying an incremented session identifier along with information identifying said change in said topology of said network.

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